

**CARDIAC DIAGNOSTICS USING TIME COMPENSATED STRESS TEST  
CARDIAC MRI IMAGING AND SYSTEMS FOR CARDIAC DIAGNOSTICS**

5

Abstract of the Disclosure

Methods of cardiac diagnostics of a patient are provided that include administering a stress test to the patient, acquiring a plurality of MRI cine loops of the heart of the patient at a plurality of heart rates, adjusting the plurality of MRI cine loops based on a heart rate associated with respective ones of the MRI cines so as to 10 compensate for differences in heart rate and evaluating the compensated MRI cine loops so as to assess a state of coronary physiology of the patient. Furthermore, the administration of the stress test may be adjusted based on the evaluated compensated MRI cine loops. Also, the evaluation of the compensated MRI cine loops may determine a presence or absence of coronary artery disease based on the compensated 15 cine loops.